

LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A loudspeaker diaphragm having an acoustic region, the loudspeaker diaphragm comprising:
 - a first region having an inner and outer surface,
 - a second region radially inward of the first region and having an inner and outer surface,
 - a coating formed on at least one surface of the first and second regions;
 - where the coating tapers from a maximum value in the first region to minimum value in the second region.
2. (Original) The loudspeaker diaphragm of claim 1 where the coating comprises a continuous layer.
3. (Original) The loudspeaker diaphragm of claim 2 where the diaphragm is at least partially formed of aluminum, titanium, magnesium, an alloy of aluminum, titanium, magnesium, or combinations thereof.
4. (Original) The loudspeaker diaphragm of claim 3 where the coating is formed of a carbide, boride, nitride, or oxide.
5. (Original) The loudspeaker diaphragm of claim 4 where the coating has a thickness of from about 0.1 microns to about 8 microns in the second region and a thickness from about 2 microns to about 100 microns in the first region.
6. (Original) The loudspeaker diaphragm of claim 4 where the coating is an anodically formed oxide layer.

7. (Original) The loudspeaker diaphragm of claim 1 where the first region is substantially conical.

8. (Original) The loudspeaker diaphragm of claim 7 where the second region is substantially cylindrical.

9. (Original) The loudspeaker diaphragm of claim 8 where the first region comprises at least a portion of the acoustic region of the diaphragm.

10. (Original) The loudspeaker diaphragm of claim 1 where the coating in the first region comprises a first area of substantially uniform thickness and a second area of non-uniform thickness.

11. (Original) The loudspeaker diaphragm of claim 10 where the second area of the first region is tapered.

12. (Original) The loudspeaker diaphragm of claim 11 where the first area is radially outward of the second area.

13. (Original) The loudspeaker diaphragm of claim 1 where at least portions of both the inner and outer surfaces of the first region are coated.

14. (Original) The loudspeaker diaphragm of claim 13 where at least portions of both the inner and outer surfaces of the second region are coated.

15. (Original) A loudspeaker diaphragm comprising:
a first region,
a second region,
a transition region between the first region and the second region,
and
a continuous coating formed on at least one major surface of the first region, the second region, and the transition region, where the coating in at least the transition region is tapered.

16. (Original) The loudspeaker diaphragm of claim 16 where at least a portion of the coating in the first region is tapered.

17. (Original) The loudspeaker diaphragm of claim 16 where the coating in the second region is of substantially uniform thickness.

18. (Original) The loudspeaker diaphragm of claim 16 where the coating in the second region is tapered.

19. (Original) The loudspeaker diaphragm of claim 18 where the coating tapers from a maximum value in the first region to a minimum value in the second region.

20. (Original) The loudspeaker diaphragm of claim 15 where a one portion of the coating in the first region is tapered and another portion of the coating is of substantially uniform thickness.

21. (Original) The loudspeaker diaphragm of claim 20 where the portion of the coating of substantially uniform thickness is radially outward of the tapered portion.

22. (Original) The loudspeaker diaphragm of claim 15 where the diaphragm is at least partially formed of aluminum, titanium, magnesium, an alloy of aluminum, titanium, magnesium, or combinations thereof.

23. (Original) The loudspeaker diaphragm of claim 22 where the coating is formed of a carbide, boride, nitride, or oxide.

24. (Original) The loudspeaker diaphragm of claim 15 where the coating has a thickness from about 0.1 microns to about 8 microns in the second region and a thickness from about 2 microns to about 100 microns in the first region.

25. (Original) The loudspeaker diaphragm of claim 23 where the coating is an anodically formed oxide layer.

26. (Original) A loudspeaker diaphragm comprising:
a conical portion
a cylindrical portion,
and a coating formed on at least one major surface of at least the conical and cylindrical portions, where the coating tapers from a maximum value on the conical portion to a minimum value on the cylindrical portion.

27. (Original) The loudspeaker diaphragm of claim 26 where the coating is continuous.

28. (Original) The loudspeaker diaphragm of claim 27 where the coating tapers from a maximum value at the periphery of the conical region to a minimum value in the cylindrical region.

29. (Original) The loudspeaker diaphragm of claim 28 where the thickness of the coating in the cylindrical region is uniform.

30. (Original) The loudspeaker diaphragm of claim 27 where the thickness of the coating in an area of the conical region adjacent the periphery of the conical region is uniform.

31. (Original) The loudspeaker diaphragm of claim 27 where the continuous coating is an anodically formed oxide layer.

32. (Original) The loudspeaker diaphragm of claim 27 including a dome attached to a surface of the coating on the conical region.

33. (Original) The loudspeaker diaphragm of claim 32 where the coating on conical region outside the dome is of uniform thickness and the coating on the conical region inward of the dome is tapered.

34. (Original) A loudspeaker diaphragm comprising:
an inner surface,
an outer surface, and
a continuous coating applied to each of the inner and outer
surfaces,
where the coating on the inner surface is tapered.
35. (Original) A loudspeaker diaphragm of claim 34 where the coating
on the outer surface is tapered.
36. (Original) A loudspeaker diaphragm of claim 35 where the coating
on the outer surface is uniform.
37. (Original) A loudspeaker diaphragm of claim 34 where the coating
on the outer surface is thinner than the coating on the inner surface.
38. – 106. (Cancelled)